



COMMONWEALTH of VIRGINIA

Department of Health DIVISION OF SHELLFISH SANITATION

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Hampton Roads: Tanner Point to Willoughby Bay Growing Area # 066 Shoreline Sanitary Survey City of Norfolk

Date: 27 August 2007
Survey Period: July 10 – July 18, 2006
Total Number of Properties Surveyed: 16
Surveyed by: H. R. Barker, Jr.

SECTION A: GENERAL

This survey area extends from Reference Point 67 at Tanner's Point on the Elizabeth River to Reference Point 68 at the western end of Willoughby Spit including the Elizabeth River between these two points, Willoughby Bay, and Masons Creek, and their tributaries. The last study of this area was conducted April 21, 1936 by the Norfolk Field Office of the Bureau of Shellfish Sanitation.

The topography of the area is low and flat; ranging from 0 -10'. The population is dense and the properties, including Naval Station Norfolk, are served by Hampton Roads Sanitation District, HRSD. The majority of the survey area from the Elizabeth River on the west margin to I64 on the east; and the south shore of Willoughby Bay to International Terminal Boulevard on the south is the Norfolk Naval Base. This installation has many piers and docks that berth over 100 ships and a large naval air station. About 83,000 active duty personnel and approximately 29,000 civilians work at the base. Over 3000 naval residences are present on the base. Civilian residential housing surrounds the naval facility and extends onto Willoughby Spit. The economy of the area is predominantly based on industry, the naval base, and those businesses that surround and serve the base and its personnel.

Meteorological data indicated that 0.48" of rain fell from July 10, 2007 – July 18, 2007; the length of the survey.

The Elizabeth River is dominated by recreational, commercial, and military vessel traffic throughout the year. The waterfront from Tanner's Point to Sewell's Point on the Elizabeth River is of interest to this shoreline sanitary survey. Naval Station Norfolk occupies approximately 4631 acres directly northwest of Norfolk and on the Sewell's Point peninsula and is the world's largest naval station. 14 large piers berth as many as 78 ships; and the adjacent air station is home to approximately 133 aircraft. Port services control over 3100 ship movements per year over the more than 4 mile waterfront. The Navy has over 100 outfalls present on the naval base and they empty into the Elizabeth River, Hampton Roads, or Willoughby Bay. The Norfolk Naval Base is also part of the Federal Superfund Program with 59 identified sites. This large naval station has access to Willoughby Bay to the north. The north

shore of this bay is civilian and home to 2 large marinas, a boat ramp, and a number of residences. The bay is open to heavy recreational boat use and is an entry point to Hampton Roads. I-564 traverses the naval base and the Virginia Department of Transportation has an outfall from a tunnel facility on the highway. The outfall discharges into Willoughby Bay by way of Bousch Creek. Adjacent the naval station on the Elizabeth River is the home to the Norfolk International Terminals, NIT. These are part of the Virginia Port authority and are the largest of the marine terminals in the Hampton Roads area. The terminals take up almost one third of the Elizabeth River waterfront from Tanner's Point at the south to Lambert's Point at the north. NIT has 18 stormwater and wash down waste water outfalls discharging into the Elizabeth River. Two sewage treatment works impact the survey area. The Hampton Roads Sanitation District (HRSD) Army Base Treatment Plant is within the survey boundary. There are large populations of resident and migratory waterfowl present in this survey area. Pets, especially dogs, in the area also add to the wastes entering the survey area.

Copies of bacteriological, hydrographical, and shellfish closure data are available at the area field office for review. Copies of the current condemnation notices and maps are available via the internet at <http://www.vdh.virginia.gov/oehs/shellfish/>.

This report lists only those properties that have a sanitary deficiency or have other environmental significance. "***DIRECT***" indicates that the significant activity or deficiency has a direct impact on shellfish waters. Individual field forms with full information on properties listed in this report are on file in the Richmond Office of the Division of Shellfish Sanitation and are available for reference until superseded by a subsequent survey of the area. Data in report are also made available to local health departments and other agencies to address items that may be out of compliance with their regulatory programs. Copies of VPDES Permits and inspections are available at the Department of Environmental Quality, Tidewater Regional Office (DEQ/TRO). HRSD contact for this survey was Nancy Munnikhaysen (460-7058, 460-2372).

SECTION B: SEWAGE POLLUTION SOURCES

SEWAGE TREATMENT WORKS

2. ***DIRECT*** – Army Base Sewage Treatment Plant, 401 Lagoon Road, Norfolk 23505. Owner: Hampton Roads Sanitation District (HRSD), 1436 Air Rail Avenue, Virginia Beach 23455. Municipal sewage treatment plant. Secondary treatment with phosphate removal is utilized at this facility. Design flow is for 18 MGD with an average daily flow of 11.28 MGD for 2006. Solids are incinerated with the ash being recycled for construction fill. Effluent is disinfected with liquid sodium hypochlorite and sodium bisulphate. Final effluent is dechlorinated before final discharge into the Elizabeth River approximately 1 mile north of Tanner's Point. Has VPDES Permit # VA0081230 from the Virginia Department of Environmental Quality, Tidewater Regional Office.

ONSITE SEWAGE DEFICIENCIES

-None-

POTENTIAL POLLUTION

-None-

SECTION C: NON-SEWAGE WASTE SITES

-None-

INDUSTRIAL WASTES

1. **DIRECT** – Norfolk International Terminals, (NIT). Virginia Port Authority, 7737 Hampton Boulevard, Norfolk 23505. Norfolk International Terminals has 18 outfalls discharging stormwater runoff and wash down waste water into the Elizabeth River. Has VPDES Permit # VA0089737 from the Department of Environmental Quality, Tidewater Regional Office.

3. **DIRECT** – Norfolk Naval Station, Norfolk 23505. Military – naval base. Outfall Series “100”: Point source discharges to State waters external to and surrounding the Naval Station, Elizabeth River, Hampton Roads, and/or Willoughby Bay). Outfall Series “200”: Point source discharges originating from Naval operations and activities that are located within Storage, Disposal, Auction Areas, SDA's, areas and that discharge storm water runoff that may enter State waters by traveling through storm water conveyances controlled by entities other than the U. S. Navy. Outfall Series “300”: Point source discharges originating from the Naval Station that discharge storm water runoff into Mason’s Creek and finally Willoughby Bay. Outfall Series “400”: Point source discharges originating internal to the Naval Station that direct storm water runoff and other flows into Bousch Creek Culvert, or other points that enter into State waters. Outfall Series “600”: Point source discharges of storm water runoff originating from that portion of the Naval Station known as Camp Allen, including the Armed Forces Staff College and the NATO activity. These discharges may enter the Bousch Creek watershed or are directed into City of Norfolk maintained collection system along Terminal and Hampton Boulevards. The majority of all outfalls are treated with a Stormwater Pollution Prevention Plan, SWP3, and Best Management Practices, BMP's. Has VPDES Permit # VA0004421 from the Department of Environmental Quality, Tidewater Regional Office.

5. **DIRECT** – Location: I-564 Tunnel Facility, Norfolk Naval Station, Norfolk 23505. Owner: Virginia Department of Transportation, (Attention: Mr. Dennis Heuer), 1700 North Main Street, Suffolk 23434. Public – tunnel beneath runway. Stormwater runoff and tunnel wash down water discharge to Bousch Creek and finally Willoughby Bay. Has VPDES Permit # VA0005835 from the Department of Environmental Quality, Tidewater Regional Office.

16. Norfolk Naval Station, Norfolk 23505. Military – naval base. Superfund Site. This installation was listed 4-1-97 on the National Priorities List (NPL). Wastes generated at Norfolk Naval base included halogenated and non-halogenated solvents, corrosives, battery electrolytes, paint waste, wastes from electroplating; contaminated petroleum, oils and lubricants, and off-specification, excess, out of date commercial products. In addition, the facility manages used oils, construction debris, PCBs, contaminated oil, general trash, and asbestos materials. 22 Installation Restoration Program (IRP) sites were identified. These included landfills, drum storage yard, PCB transformer storage and work areas, slag piles, pesticide disposal areas, aircraft maintenance, and a salvage yard. There were also 25 solid waste sites investigated at the Norfolk Naval Base. Eighteen potential sources of contamination were also identified at that time. Since then an ongoing cleanup of the contaminated sites has taken place.

SOLID WASTE DUMPSITES

-None-

SECTION D: BOATING ACTIVITY

MARINAS

4. United States Naval Station (REC). Sailing, 1025 A. Winged Foot Court. Manager: Jim McMichaels (757)444-2918. Military – military private marina. 11 employees. 165 seasonal slips and 1 transient slip. Present at the time of the last survey were 75 boats under 26' and 70 boats over 26'. Boating services provided are fuel, water, electricity, and an in-out ramp. On-shore sanitary services are 2 commodes, 2 urinals, 4 lavatories, and 2 showers for men and; 4 commodes, 4 lavatories, and 2 showers for women. Sewage disposal is to Hampton Roads Sanitation District sanitary sewer. Solid waste containers, boat holding tank pump-out, and dump station are provided.
8. Willoughby Boat Club Condo, 863 Little Bay Avenue, Norfolk 23503. Marine - private pier for homeowners. 14 units. 14 slips. Present at the time of the last inspection was 1 boat over 26'. The only boating service provided is electricity. On-shore sanitary facilities are at the individual residences. Sewage disposal is to Hampton Roads Sanitation District sanitary sewer. Has exemption to the requirements to provide holding tank pump-out and dump station. There are no solid waste containers at this location.
13. Willoughby Harbor Ltd., 1525 Bayville Street, Norfolk 23503. Owner: Peter Anzo, Viking Marine Group, 2839 Paces Ferry Road, Suite 880, Atlanta Georgia 30339. Marine – commercial marina. 265 seasonal slips, 1 transient slip, and 11 dry storage spaces. Present at the time of the last inspection were 83 boats under 26' and 122 boats over 26'. Boating services provided are water and electricity. On-shore sanitary facilities are 4 commodes, 3 urinals, 5 lavatories, and 3 showers for men; and 6 commodes, 5 lavatories, and 3 showers for women. Sewage disposal is to Hampton Roads Sanitation District sanitary sewer. Boat holding tank pump-out service, dump station, and solid waste containers are provided at this location.
14. Rebel Marine Service, 1553 Bayville Street, Norfolk 23503. Owner: David Briggs. Marine – commercial marina. 5 employees. 80 seasonal slips and 2 transient slips. Present at the time of the last inspection were 7 boats under 26' and 63 boats over 26'. Boating services provided are water and electricity. On-shore sanitary facilities are 1 commode, 1 urinal, 1 lavatory, and 1 shower for men; and 2 commodes, 1 lavatory, and 1 shower for women; and 1 commode and 1 lavatory for unisex use. Sewage disposal is to Hampton Roads Sanitation District sanitary sewer. Boat holding tank pump-out service, dump station, and solid waste containers are provided at this location.
15. Spectrum at Willoughby Point, 1611 Bayville Street, Norfolk 23503. Owner: Futura Group, Virginia Beach. Marine – future marina for un-built condominium community. 4 employees. There are no slips. There are no boating services at this location. On-shore sanitary facilities, (for business office), are 1 commode, 1 urinal, and 2 lavatories for men; and 2 commodes and 2 lavatories for women. Sewage disposal is to Hampton Roads Sanitation District sanitary sewer.

OTHER PLACES WHERE BOATS ARE MOORED

6. Occupant: Little Bay Harbor Marina, 787 West Ocean View Ave., Norfolk 23503. Owner: Bayside Building Corp., 1815 Candlelight Dr. Chesapeake 23325. Marine-private pier for homeowners. 8 units. 10 slips. Present at the time of the last inspection were 1 boat under 26' and 2 boats over 26'. No boating services are available at this location. On-shore sanitary facilities are at the individual residences. Sewage disposal is to Hampton Roads Sanitation District sanitary sewer. Solid waste disposal containers and boat holding tank pump-out are provided at this location.
7. Little Bay Beach & Boat Club Assoc. Inc., 833 Little Bay Avenue, Norfolk 23517. Marine – private pier for homeowners. 45 units. 9 slips. Present at the time of the last inspection were 1 boat under 26' and 1 boat over 26' facilities are at the individual residences. Sewage disposal is to Hampton Roads Sanitation District sanitary sewer. Has exemption to the requirements to provide holding tank pump-out and dump station. Solid waste disposal containers are provided at this location.
10. Albert N. Williams, 1201 Little Bay Avenue, Norfolk 23503. Marine – private pier. 2 persons. 5 slips. Present at the time of the last inspection were 5 boats over 26'. Boating services provided are electricity and water. Has an exemption to the requirement for on-shore facilities. Has exemption to the requirements for boat holding tank pump-out and dump station. Solid waste containers at this location.
11. Willoughby Boat Ramp, Bayville Street, Norfolk 23503. Owner: Norfolk Parks and Recreation, 501 Boush Street, Norfolk 23510. Marine – public boat ramp. No slips. No boats were present at the time of this survey. The only boating service is an in-out boat ramp. On-shore sanitary facilities are 1 unisex rental toilet. There are no boat holding tank pump-out or dump station facilities at this location. There is a solid waste container at this location.

UNDER SURVEILLANCE

9. View Condominiums, 9801 Ninth View Street, Norfolk 23503. Owner: Zephyr Associates, 210 Main Street, Smithfield 23437. Marine – beach. 12 units. No slips, only a sandy beach at rear of residences. No boating services are available at this location. On-shore sanitary facilities are at the individual residences. Sewage disposal is to Hampton Roads Sanitary sewer. There are no boat holding tank pump-out, dump station, or solid waste containers provided at this location.
12. Cooper's Pier, 1443 Bayville Street, Norfolk 23503. Owner: Gertrude Svirsky, 7413 Millbrook Road, Norfolk 23505. Marine – dock behind residence. No contact. 20 slips. No boating services are available at this location. Has an exemption to the requirement to provide boat holding tank pump. There is no dump station at this location. There is a solid waste container at this location. Storm damage appears to have destroyed the majority of this facility.

SUMMARY

Area # 066
Hampton Roads: Tanner's Point to Willoughby Bay
27 August 2007

SECTION B: SEWAGE POLLUTION SOURCES

1. SEWAGE TREATMENT FACILITIES

- 1 – DIRECT – # 2
- 0 – INDIRECT – None
- 1 – B.1. TOTAL

2. ON-SITE SEWAGE DEFICIENCIES - Correction of deficiencies in this section is the responsibility of the local health department.

- 0 – CONTRIBUTES POLLUTION, DIRECT – None
- 0 – CONTRIBUTES POLLUTION, INDIRECT – None
- 0 – CP (Kitchen or Laundry Wastes), DIRECT – None
- 0 – CP (Kitchen or Laundry Wastes), INDIRECT – None
- 0 – NO FACILITIES, DIRECT – None
- 0 – NO FACILITIES, INDIRECT – None
- 0 – B.2. TOTAL

3. POTENTIAL POLLUTION - Periodic surveillance of these properties will be maintained to determine any status change.

- 0 – POTENTIAL POLLUTION – None

SECTION C: NON-SEWAGE WASTE SITES

1. INDUSTRIAL WASTE SITES

- 3 – DIRECT – # 1, 3, 5
- 1 – INDIRECT – # 16
- 4 – C.1. TOTAL

2. SOLID WASTE DUMPSITES

- 0 – DIRECT – None
- 0 – INDIRECT – None
- 0 – C.2. TOTAL

SECTION D: BOATING ACTIVITY

- 5 – MARINAS – # 4, 8, 13, 14, 15
- 4 – OTHER PLACES WHERE BOATS ARE MOORED – # 6, 7, 10, 11
- 2 – UNDER SURVEILLANCE – # 9, 12
- 11 – D. TOTAL

SECTION E: CONTRIBUTES ANIMAL POLLUTION

- 0 – DIRECT – None
- 0 – INDIRECT – None
- 0 – E. TOTAL

76°21'0"W 76°19'30"W 76°18'0"W 76°16'30"W 76°15'0"W

Virginia Department of Health Division of Shellfish Sanitation

Hampton Roads: Tanner Point to Willoughby Spit # 066

Shoreline Sanitary Survey

City of Norfolk

Date: 27 August 2007
Survey By: H.R. Barker, Jr.
Number of Properties Surveyed: 16

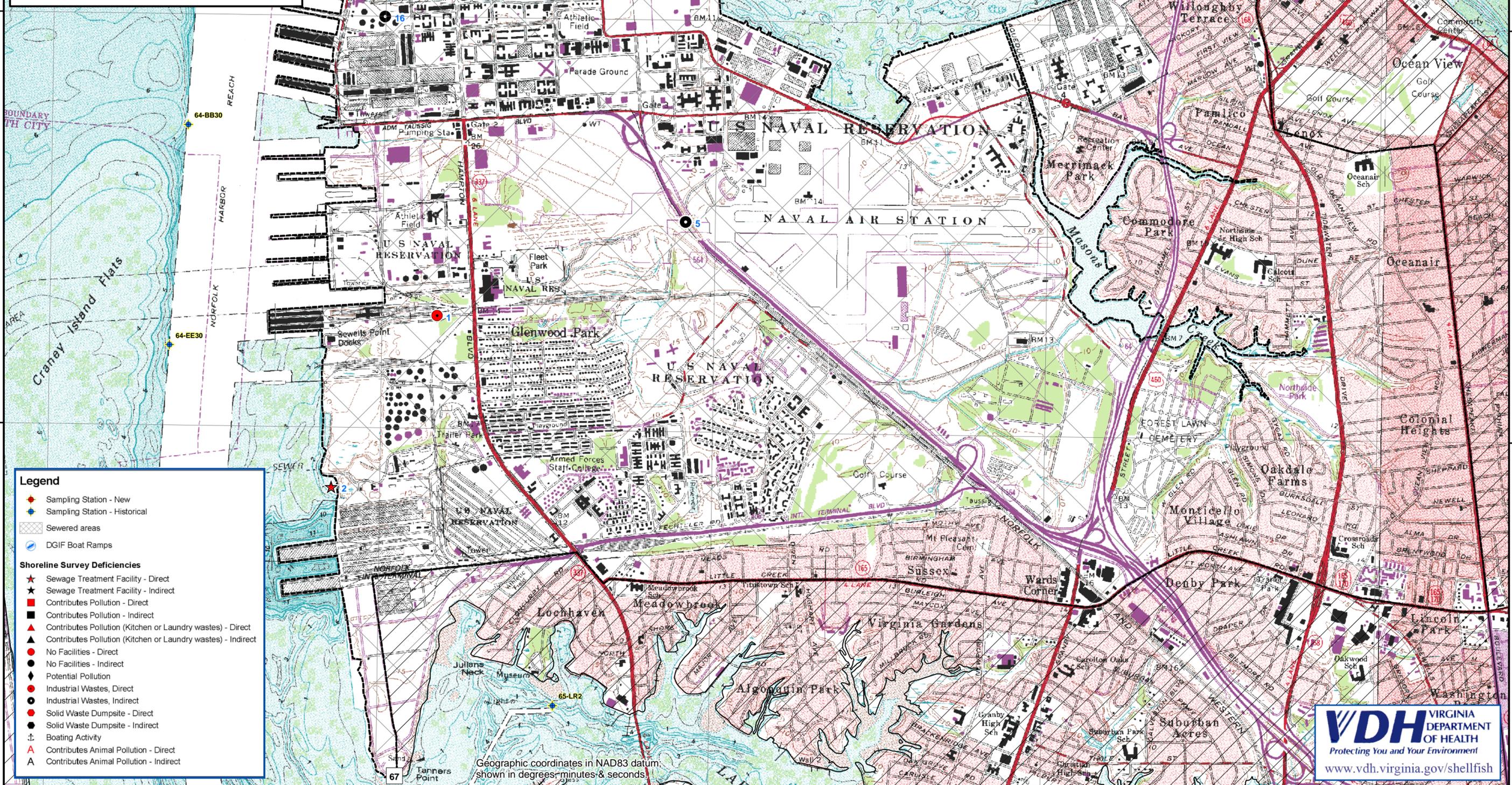


36°57'0"N

36°55'30"N

36°57'0"N

36°55'30"N



Legend

- ◆ Sampling Station - New
 - ◆ Sampling Station - Historical
 - Sewered areas
 - ⬇ DGIF Boat Ramps
- #### Shoreline Survey Deficiencies
- ★ Sewage Treatment Facility - Direct
 - ★ Sewage Treatment Facility - Indirect
 - Contributes Pollution - Direct
 - Contributes Pollution - Indirect
 - ▲ Contributes Pollution (Kitchen or Laundry wastes) - Direct
 - ▲ Contributes Pollution (Kitchen or Laundry wastes) - Indirect
 - No Facilities - Direct
 - No Facilities - Indirect
 - ◆ Potential Pollution
 - Industrial Wastes, Direct
 - Industrial Wastes, Indirect
 - Solid Waste Dumpsite - Direct
 - Solid Waste Dumpsite - Indirect
 - ⚓ Boating Activity
 - A Contributes Animal Pollution - Direct
 - A Contributes Animal Pollution - Indirect

Geographic coordinates in NAD83 datum,
shown in degrees-minutes-& seconds.

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment
www.vdh.virginia.gov/shellfish

76°21'0"W 76°19'30"W 76°18'0"W 76°16'30"W 76°15'0"W